Article 34 Amdt

AMENDED CLAIMS

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1. A stator winding in a rotating electric machine comprising a stator (106) provided with radial slots (111) to hold a winding, in layers at different radial distances from the air gap (108) between the rotor (107) and the stator (106), characterized in that the winding is in the form of a cable wherein the part of the cable (101) that passes to and fro once through the stator (106) between different layers forms a coil (113) with an arc-shaped coil end protruding from each end surface (114) of the stator (106), and in that the coils (113) are divided into coil group parts and that all coils (113) in the same coil group part are arranged axially, one outside the other with substantially coinciding centres and with successively increasing diameters, the number of slots (111) that are bridged by the coils (113) successively increasing within the coil group part.

2. A stator winding as claimed in claim 1, characterized in that the coils (113) produce a formation from the air gap (108) towards the stator yoke (115) since, on passing from the first slot to the second, and also upon returning to the first slot, the cable (101) changes position to the next layer immediately outside until a number of positions in the slot have been filled and then passes to the nearest adjacent slot to form coils (113) that lie inside or outside the cable (101) in the other coils (113) included in the coil group part in the same formation.

3. A stator winding as claimed in claim 1, characterized in that all coils (113) in a coil group part are formed in sequence from the cable (101), the cable only subsequently passing to the next following coil group part to produce the latter.

4. A stator winding as claimed in any of claims 1-3, characterized in that the number of coils (113) in the coil group part is three.

5. A stator winding as claimed in any of claims 1-3, characterized in that the number of coils (113) in the coil group parts is four.

6. A stator winding as claimed in claim 1, characterized in that the coil group parts (116, 117) are arranged in relation to each other in peripheral direction such that alternate coil group parts (116) on their way to a radial outer layer are situated radially inside the next following coil group part (117) and alternate coil group parts (117) are situated radially outside the next following coil group part (116).

7. A stator winding as claimed claim 6, characterized in that the coils (113) are formed by the cable (101) upon passage from a first slot to a second slot, and also upon returning to the first slot, changing position to the next adjacent layer, and thereafter passing to the nearest adjacent slot and there filling corresponding positions, until two coil group parts have been formed simultaneously between altogether four positions in the relevant slots, whereupon the cable (101) continues in this way until these positions have been filled in all slots (111) of the stator (106).

8. A stator winding as claimed in any of claims 1-7, characterized in that a pressure-distributing and wear-preventing curable compound is provided between the cables in the coil end package.

9. A rotating electric machine, characterized in that it is provided with a stator winding as claimed in any of claims 1-8.

10. A rotating electric machine as claimed in claim 9, characterized in that the winding comprises one or more current-carrying conductors (102), wherein a first layer (103) having semiconducting properties is arranged around each conductor, a permanently insulating layer (104) is arranged around the first layer (103), and a second layer (105) having semiconducting properties is arranged around the insulating layer.

11. A rotating electric machine as claimed in claim 10, characterized in that the first layer (103) is at substantially the same potential as the conductor (102).

12. A rotating electric machine as claimed in claim 10 or claim 11, characterized in that the second layer (105) is arranged in such a manner that it constitutes substantially an equipotential surface surrounding the conductor(s).

13. A rotating electric machine as claimed in claim 12, characterized in that the second layer (105) is connected to a special potential.

14. A rotating electric machine as claimed in claim 13, characterized in that the special potential is earth potential.

15. A machine as claimed in any of claims 10-14, characterized in that at least two of said layers have substantially the same coefficient of thermal expansion.

16. A rotating electric machine as claimed in any of claims 10-15, characterized in that the current-carrying conductor (102) comprises a number of strand parts, only a few of the strand parts not being insulated from each other.

17. A rotating electric machine as claimed in any of claims 10-16, characterized in that each of said three layers is permanently connected to adjacent layers along substantially its entire continuous surface.

18. A rotating electric machine as claimed in claim 9 with magnetic circuit for high voltage wherein the magnetic circuit comprises a magnetic core and a winding, characterized in that the winding consists of a cable comprising one or more current-carrying conductors (102), each conductor consisting of a number of strand parts, an inner semiconducting layer (103) being arranged around each conductor, an insulating layer (104) of permanent insulation being arranged around the semiconducting layer (103), and a semiconducting layer (105) being arranged around the insulating layer.

19. A rotating electric machine with magnetic circuit for high voltage as claimed in claim 18, characterized in that the cable is also provided with metal screening and a sheath.